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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,398	10/29/2003	Takeshi Sakamoto	1065.1034	6798
21171	7590	02/06/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			DIACOU, ARI M	
			ART UNIT	PAPER NUMBER
			3663	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/695,398	<b>Applicant(s)</b> SAKAMOTO, TAKESHI	
	<b>Examiner</b> Ari M. Diacou	<b>Art Unit</b> 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-19 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                      |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| Paper No(s)/Mail Date _____   | 6) <input checked="" type="checkbox"/> Other: <u>Reasons for allowance</u> . |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant makes four arguments directed towards the independent claims 1, 4, 8 and 14, found on page 8, ¶ 5-6, page 9 ¶ 1, page 9 ¶ 2, page 9 ¶ 3, and page 9 ¶ 4 respectively.

- The applicant's arguments regarding claim 1, filed 1-3-2006 have been fully considered but they are not persuasive. The applicant suggests that Onaka does not disclose a device for determining the state of use of the optical amplifier, and therefore the applicant is distinguished over Onaka thereby. The action filed 8-2-2005, stated for the record that the examiner would consider the state of use to be the tilt itself of the amplifier. The applicant in neither the specification nor the arguments asserts or refutes this assertion. If the state of the amplifier is considered to be the tilt itself, then controller 4 of Onaka does decide whether or not to perform a slope correction [Col. 8, line 41 – Col 9, line 16].
- Regarding the three arguments on page 9, Applicant's arguments, have been fully considered and are persuasive. The rejections of claims 4, 8 and 14 have been withdrawn.

### ***Allowable Subject Matter***

2. Claims 4-19 are allowed.

Art Unit: 3663

3. The following is a quotation of the sixth paragraph of 35 U.S.C. 112:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

4. All the claims have been reviewed for compliance with 35 U.S.C. 112, and the examiner has determined that “means for” clauses that appear throughout the claims all invoke 35 U.S.C. 112 paragraph 6 properly, in light of the statute and appropriate case law.

5. Regarding claim 4, the prior art does not teach or make obvious the use of

- means for deciding whether or not to cause said optical amplifier to perform a slope correction based upon the state of flattening-control implementation by said Raman amplifier

within the context of claim 4 taken as a whole.

6. Regarding claim 8, the prior art does not teach or make obvious the use of

- a means for setting the amount of slope correction in said slope-correction control means of said Raman amplifier; wherein the amount of slope correction is calculated by acquiring an amount of tilt at an input section of each optical amplifier that is downstream from the Raman amplifier, summing the amounts of tilt to produce an overall tilt, dividing the overall amount of tilt by the number of input sections downstream from the Raman amplifier to

Art Unit: 3663

produce a result, and adding the result of division to a current amount of slope correction

within the context of claim 8 taken as a whole.

7. Regarding claim 14, the prior art does not teach or make obvious the use of
- and means for acquiring information concerning wavelength-dependent loss of the optical loss medium between nodes and amount of slope correction by each optical amplifier and Raman amplifier, calculating from this information and amounts of slope correction an amount of tilt of a wavelength characteristic at an input section of each optical amplifier, deciding amounts of slope correction by optical loss compensators in order from an upstream side using the amount of tilt, and repeating the above control with respect to a downstream node when the amount of slope correction has exceeded the capability of the optical amplifiers, thereby deciding and setting amount of slope correction by each optical amplifier

within the context of claim 14 taken as a whole.

8. Regarding claim 19, the prior art does not teach or make obvious the use of
- a decision unit to activate the slope correction unit only if a Raman amplifier is not provided at the transmitter link

within the context of claim 19 taken as a whole.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Onaka et al. (USP No. 6785042).

- Regarding claim 1, Onaka discloses a wavelength-division multiplexing optical communication system in which an optical lossy medium, optical amplifiers and Raman amplifiers for compensating for loss in the optical lossy medium are cascade-connected, said system comprising: [Fig. 1] [Fig. 25]
  - means, which is provided in an optical amplifier, for correcting slope of a wavelength characteristic produced by wavelength-dependent loss of the optical lossy medium; [Fig. 1, #2] [Fig. 21, 22] [Col. 8, line 40 - Col. 9, line 17]
  - acquisition means for acquiring state of use of a Raman amplifier, at a node the same as that of the optical amplifier; [Fig. 1, #3] [The examiner considers the state of use to be the amplifier gain tilt]
  - and means for deciding, based upon the state of use of the Raman amplifier, whether or not to cause the optical amplifier to perform a slope correction. [Fig. 1, #4]

- Regarding claim 2, Onaka discloses the system according to claim 1, wherein said acquisition means includes:
  - means for demultiplexing light of a monitoring control signal from main-signal light; [Fig. 40] [Col. 17, lines 7-12]
  - and means for acquiring, from the light of the monitoring control signal in a link opposing that of said optical amplifier, the state of use of a Raman amplifier at a node downstream of said optical amplifier. [Fig. 1, #4] [Fig. 40]
- Regarding claim 3, Onaka discloses the system according to claim 1, further comprising an external control unit for ascertaining the state of use of a Raman amplifier at each node based upon a monitoring control signal sent and received at each node together with main-signal light; wherein said acquisition means acquires, from said external control unit, state of use of a Raman amplifier at a node downstream of said optical amplifier. [Fig. 40] [Fig. 47, #4]

### ***Conclusion***

11. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

12. The references made herein are done so for the convenience of the applicant. They are in no way intended to be limiting. The prior art should be considered in its entirety.

13. The prior art which is cited but not relied upon is considered pertinent to applicant's disclosure.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ari M. Diacou whose telephone number is (571) 272-5591. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

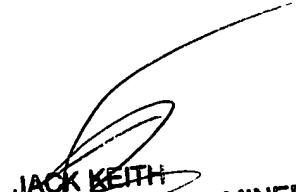
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMD 1/31/2006

  
JACK KEITH  
SUPERVISORY PATENT EXAMINER